

AMENDMENTS TO THE CLAIMS

Please amend the present application as follows:

Claims

1. (Currently amended) A LED device for directing light in a predetermined light emission pattern including:

a LED;

a light reflecting cavity in which the LED resides;

a first encapsulant that at least partially encapsulates the LED and resides within the light reflecting cavity, the first encapsulant comprising a first percentage of a first light reflecting substance;

a second encapsulant residing above the first encapsulant~~[[;]],~~ the second encapsulant comprising a second percentage of a second light reflecting substance, the second percentage being less than the first percentage, wherein the first and second light reflecting substances reduce the occurrence of light rays that stray from the predetermined light emission pattern;

a first device terminal;

a first connection between the first device terminal and the LED;

a second device terminal; and

a second connection between the second device terminal and the LED; and

~~wherein the first encapsulant is partially comprised of a first percentage of a first light reflecting substance; wherein the first light reflecting substance reduces the occurrence of light rays that stray from the predetermined light emission pattern.~~

2. (Original) A LED device for directing light according to claim 1 wherein a side surface of the LED is at least partially encapsulated by the first encapsulant.

3. (Original) A LED device for directing light according to claim 2 wherein a side surface of the LED is completely encapsulated by the first encapsulant.

4. (Original) A LED device for directing light according to claim 3 wherein the upper surface of the first encapsulant resides above an upper surface of the LED.

5. (Original) A LED device for directing light according to claim 1 wherein the first encapsulant fills the light reflecting cavity to an upper perimeter of the light reflecting cavity.

6 - 7. (Canceled)

8. (Currently amended) A LED device for directing light according to claim 6 1 wherein one of the second percentage is less than approximately one third of the first percentage and the second percentage is less than approximately one half of the first percentage.

9. (Currently amended) A LED device for directing light according to claim 6 1 wherein the first encapsulant has a reflecting strength and the second encapsulant has a reflecting strength; wherein the reflecting strength of the first encapsulant is greater than the reflecting strength of the second encapsulant.

10. (Original) A LED device for directing light according to claim 1 wherein the first percentage is between 3% and 40%.

11. (Canceled)

12. (Original) A LED device for directing light according to claim 1 wherein the first percentage is between 3% and 10%.

13. (Canceled)

14. (Currently amended) A method for constructing a LED device including:

mounting a LED ~~into~~ inside a light reflecting cavity;

connecting the LED to a first device terminal and a second device terminal;

at least partially filling the light reflecting cavity with a first encapsulant ~~which is at least partially comprised of~~ comprising a first percentage of a first light reflecting substance; ~~wherein the first light reflecting substance reduces the occurrence of light rays that stray from a predetermined light emission pattern;~~ and

placing a second encapsulant above the first encapsulant, the second encapsulant

comprising a second percentage of a second light reflecting substance, the second percentage being less than the first percentage.

15. (Canceled)

16. (Currently amended) A method for constructing a LED device according to claim ~~15~~ 14 wherein the second percentage is zero ~~less than the first percentage~~.

17. (Previously presented) A LED device for directing light according to claim 1 wherein the light reflecting substance includes particles with a mean size in the range of about 20 microns to about 60 microns.

18. (Previously presented) A LED device for directing light according to claim 1 wherein the light reflecting substance is at least one of calcium carbonate, titanium dioxide, and glass particles.

19. (Previously presented) A LED device for directing light according to claim 1 wherein the first encapsulant includes a base substance that is at least one of epoxy, silicone, and inorganic glass material.

20. (Previously presented) A LED device for directing light according to claim 1 wherein the composition of the first encapsulant is one of

97% of a base substance and 3% of the first light reflecting substance with respect to a weight associated with the first encapsulant; and

between approximately 50% and approximately 97% of a base substance;
between approximately 3% and approximately 40% of the first light reflecting substance;
and between 0% and approximately 10% of a thixotropic agent relative to a weight associated with the first encapsulant.

21. (New) A LED device for directing light in a predetermined light emission pattern including:

a LED;

a light reflecting cavity in which the LED resides;

a first encapsulant that resides within the light reflecting cavity and at least partially encapsulates the LED, the first encapsulant comprising a light reflecting substance;

and

a second encapsulant residing above the first encapsulant, the second encapsulant containing no light reflecting substance, wherein the first and second encapsulants reduce the occurrence of light rays that stray from the predetermined light emission pattern.

22. (New) The LED device of claim 21, wherein the light reflecting substance comprises one of a) calcium carbonate and b) titanium dioxide.

23. (New) A LED device for directing light according to claim 1, wherein the first light reflecting substance is the same as the second light reflecting substance.